

IN THE CLAIMS

We claim:

1. An apparatus using a first voltage terminal and a second voltage terminal, comprising:
 - a first electrode coupled to the first voltage terminal;
 - a second electrode coupled to the second voltage terminal;
 - a heating strip having a first end and a second end, the first end coupled to the first voltage terminal, the second end coupled to the second voltage terminal;wherein the first electrode is selectively connectable to the heating strip at a first intermediate contact, the first intermediate contact of the heating strip disposed between the first end and the second end; and
 - wherein the second electrode is selectively connectable to the heating strip at a second intermediate contact, the second intermediate contact of the heating strip disposed between the first intermediate contact and the second end.
2. The apparatus of claim 1, further comprising:
 - a swing arm having a first end and a second end, the first end of the swing arm connected to the first electrode, the second end of the swing arm connected to the second electrode.

3. The apparatus of claim 2, further comprising:

a stepper motor coupled to a midpoint of the swing arm.

4. The apparatus of claim 2, further comprising:

a gear coupled to the swing arm at a midpoint of the swing arm.

5. The apparatus of claim 4, further comprising:

a plunger having a set of teeth on a first side of the plunger, teeth of the set of teeth enmeshed with teeth of the gear.

6. The apparatus of claim 5, further comprising:

a housing surrounding a first end of the plunger, the housing having a first opening and a second opening, the plunger extending out of the first opening, the second opening coupled to a vacuum trough.

7. The apparatus of claim 6, further comprising:

a pinion connected to a center of the gear at a first end of the pinion, the pinion further connected to the midpoint of the swing arm at a second end of the pinion; and

a mounting arm having a hole, the pinion inserted in the whole, the mounting arm disposed between the gear and the swing arm.

8. The apparatus of claim 7, further comprising:

a weight coupled to the swing arm at a point of the swing arm between the first end of the swing arm and the midpoint of the swing arm.

9. The apparatus of claim 8, further comprising:

a spring disposed between the swing arm and the weight.

10. The apparatus of claim 7, further comprising:

a container housing having therein a chamber, the chamber including the gear, the pinion, the plunger, the swing arm, the first electrode and the second electrode, the container housing having a receptacle on an interior wall of the container housing; and

a spring connected to the swing arm at a point of the swing arm between the first end of the swing arm and the midpoint of the swing arm, the spring further connected to the receptacle of the container housing.

11. The apparatus of claim 10, wherein:

the first voltage terminal provides a zero volt potential and the second voltage terminal provides a ten volt potential.

12. The apparatus of claim 1, wherein:

the first voltage terminal provides a zero volt potential and the second voltage terminal provides a ten volt potential.

13. The apparatus of claim 1, further comprising:

a first switch connected to the first electrode and connected to the first intermediate contact, the first switch disposed between the first electrode and the first intermediate contact; and

a second switch connected to the second electrode and connected to the second intermediate contact, the second switch disposed between the second electrode and the second intermediate contact.

14. The apparatus of claim 13, further comprising:

a controller coupled to a control terminal of the first switch and coupled to a control terminal of the second switch.

15. The apparatus of claim 14, further comprising:

a vacuum sensor coupled to the controller.

16. The apparatus of claim 10, further comprising:

a vacuum pump coupled to the vacuum trough;

a controller coupled to the vacuum pump; and

a thermistor coupled to the controller.

17. The apparatus of claim 10, further comprising:
a vacuum pump coupled to the vacuum trough; and
a timing circuit coupled to the vacuum pump.

18. The apparatus of claim 5, further comprising:
a manually operated control coupled to the plunger.

19. The apparatus of claim 10, further comprising:
a transformer coupled to the first voltage terminal and the second voltage terminal; and
a manually operated control coupled to the transformer.

20. The apparatus of claim 15, further comprising:
a thermal sensor coupled to the controller and coupled to the heating strip.

21. The apparatus of claim 15, further comprising:
a timing circuit coupled to the controller.

22. The apparatus of claim 14, further comprising:
a manually operated activation component coupled to the controller.

23. The apparatus of claim 15, further comprising:

a timer embodied in the controller.

24. The apparatus of claim 23, further comprising:

an oscillator coupled to the controller.

25. A method of sealing a seam of a bag, comprising:

sealing a first side of the seam utilizing a first configuration;

vacuuming gases from the bag;

sensing a vacuum condition responsive to the vacuuming the bag;

shifting to a second configuration; and

sealing a second side of the seam utilizing the second configuration.

26. The method of claim 25, further comprising:

sensing a non-vacuum condition; and

shifting from the second configuration to the first configuration.

27. The method of claim 26, further comprising:

initializing in the first configuration.

28. The method of claim 26, wherein:

the first side is a left side; and the second side is a right side.

29. The method of claim 26, wherein:

shifting to the second configuration includes disconnecting a first electrode from a seal wire and connecting a second electrode to the seal wire.

30. The method of claim 26, wherein:

shifting to the second configuration includes decoupling a first electrode from a seal wire and coupling a second electrode to the seal wire.

31. The method of claim 30, wherein:

shifting to the first configuration includes coupling a first electrode to the seal wire and decoupling a second electrode from the seal wire.

32. The method of claim 29, wherein:

shifting to the first configuration includes connecting a first electrode to the seal wire and disconnecting a second electrode from the seal wire.

33. The method of claim 32, wherein:

shifting to the first configuration includes moving a plunger responsive to the vacuum condition, and rotating a gear coupled to the plunger, the gear further coupled to the first electrode and the second electrode.

34. The method of claim 33, wherein:

shifting to the second configuration includes rotating the gear responsive to the non-vacuum condition and moving the plunger.

35. The method of claim 25, further comprising:

timing the sealing the first side, the vacuuming occurring responsive to the timing.

36. The method of claim 35, further comprising:

timing the sealing the second side; and

stopping the sealing the second side responsive to the timing.

37. The method of claim 25, further comprising:

sensing a temperature associated with sealing the first side; and

the vacuuming occurring responsive to the sensing.

38. The method of claim 25, further comprising:

sensing a temperature associated with sealing the first side.

39. The method of claim 25, wherein:

the method progresses responsive to manually generated control signals.

40. The method of claim 25, wherein:
shifting to the second configuration occurs responsive to a manually
generated control signal.

41. An apparatus, comprising:
means for sealing a first portion of a plastic bag and a second portion of a
plastic bag;
first means for activating the means for sealing for the first portion;
second means for activating the means for sealing for the second portion;
and
means for switching between the first means for activating and the second
means for activating.

42. An apparatus for sealing a plastic bag, comprising:
a power source having a high voltage terminal and a low voltage terminal;
a container housing having therein a chamber, the power source
disposed within the chamber,
the container housing further having a vacuum channel, the vacuum
channel having a first receptacle and a second receptacle;
a vacuum pump disposed within the chamber;

a tube having a first end connected to the vacuum pump and a second end connected to the first receptacle of the vacuum channel;

a first electrode coupled to the low voltage terminal;

a second electrode coupled to the high voltage terminal;

a heating strip mounted on a surface of the container housing, the heating strip having a first end and a second end, the first end coupled to the low voltage terminal, the second end coupled to the high voltage terminal;

wherein the first electrode is selectively connectable to the heating strip at a first intermediate contact, the first intermediate contact of the heating strip disposed between the first end and the second end; and

wherein the second electrode is selectively connectable to the heating strip at a second intermediate contact, the second intermediate contact of the heating strip disposed between the first intermediate contact and the second end.

43. The apparatus of claim 42, further comprising:

a swing arm having a first end and a second end, the first end of the swing arm connected to the first electrode, the second end of the swing arm connected to the second electrode.

44. The apparatus of claim 43, further comprising:

a gear coupled to the swing arm at a midpoint of the swing arm.

45. The apparatus of claim 44, further comprising:

a plunger having a set of teeth on a first side of the plunger, teeth of the set of teeth enmeshed with teeth of the gear.

46. The apparatus of claim 45, further comprising:

a housing surrounding a first end of the plunger, the housing having a first opening and a second opening, the plunger extending out of the first opening, the second opening coupled to the second receptacle of the vacuum channel.

47. The apparatus of claim 46, further comprising:

a pinion connected to a center of the gear at a first end of the pinion, the pinion further connected to the midpoint of the swing arm at a second end of the pinion; and

a mounting arm having a hole, the pinion inserted in the whole, the mounting arm disposed between the gear and the swing arm, the mounting arm mounted on an inner surface of the chamber of the container housing.

48. The apparatus of claim 47, further comprising:

a spring connected to the swing arm at a point of the swing arm between the first end of the swing arm and the midpoint of the swing arm, the spring further connected to a receptacle of the chamber.

49. The apparatus of claim 42, wherein:

the low voltage terminal provides a zero volt potential and the high voltage terminal provides a ten volt potential.

50. The apparatus of claim 48, wherein:

the low voltage terminal provides a zero volt potential and the high voltage terminal provides a ten volt potential.

51. The apparatus of claim 42, further comprising:

a first switch connected to the first electrode and connected to the first intermediate contact, the first switch disposed between the first electrode and the first intermediate contact; and

a second switch connected to the second electrode and connected to the second intermediate contact, the second switch disposed between the second electrode and the second intermediate contact.

52. The apparatus of claim 51, further comprising:

a controller coupled to a control terminal of the first switch and coupled to a control terminal of the second switch.

53. The apparatus of claim 52, further comprising:

a vacuum sensor coupled to the controller, the vacuum sensor coupled to the second receptacle of the vacuum channel.

54. The apparatus of claim 42, wherein:

the power source is a transformer.

55. The apparatus of claim 53, wherein:

the power source is a transformer.

56. The apparatus of claim 55, wherein:

the controller is coupled to the vacuum pump; and further comprising:

an oscillator coupled to the controller.

57. An apparatus for selective application of electric voltage to a first voltage reception point and a second voltage reception point, using a first voltage terminal and a second voltage terminal, comprising:

a first electrode coupled to the first voltage terminal;

a second electrode coupled to the second voltage terminal;

wherein the first electrode is selectively connectable to the first voltage reception point; and

wherein the second electrode is selectively connectable to the second voltage reception point.

58. The apparatus of claim 57, wherein:
the first voltage reception point and the second voltage reception point
are located at intermediate locations of a sealing strip.

59. The apparatus of claim 57, further comprising:
a swing arm having a first end and a second end, the first end of the
swing arm connected to the first electrode, the second end of the swing arm
connected to the second electrode.

60. The apparatus of claim 59, further comprising:
a gear coupled to the swing arm at a midpoint of the swing arm.

61. The apparatus of claim 60, further comprising:
a plunger having a set of teeth on a first side of the plunger, teeth of the
set of teeth enmeshed with teeth of the gear.

62. The apparatus of claim 61, further comprising:
a housing surrounding a first end of the plunger, the housing having a first
opening and a second opening, the plunger extending out of the first opening,
the second opening coupled to a vacuum trough.

63. The apparatus of claim 62, further comprising:

a pinion connected to a center of the gear at a first end of the pinion, the pinion further connected to the midpoint of the swing arm at a second end of the pinion; and

a mounting arm having a hole, the pinion inserted in the whole, the mounting arm disposed between the gear and the swing arm.

64. The apparatus of claim 63, further comprising:

a container housing having therein a chamber, the chamber including the gear, the pinion, the plunger, the swing arm, the first electrode and the second electrode, the container housing having a receptacle on an interior wall of the container housing; and

a spring connected to the swing arm at a point of the swing arm between the first end of the swing arm and the midpoint of the swing arm, the spring further connected to the receptacle of the container housing.

65. The apparatus of claim 64, wherein:

the first voltage terminal provides a zero volt potential and the second voltage terminal provides a ten volt potential.

66. The apparatus of claim 57, wherein:

the first voltage terminal provides a zero volt potential and the second voltage terminal provides a ten volt potential.

67. The apparatus of claim 57, further comprising:

a first switch connected to the first electrode and connected to the first intermediate contact, the first switch disposed between the first electrode and the first intermediate contact; and

a second switch connected to the second electrode and connected to the second intermediate contact, the second switch disposed between the second electrode and the second intermediate contact.

68. The apparatus of claim 67, further comprising:

a controller coupled to a control terminal of the first switch and coupled to a control terminal of the second switch.

69. A method of sealing a seam of a bag, comprising:

vacuuming gases from the bag;

sealing a first portion of the seam utilizing a first configuration;

shifting to a second configuration; and

sealing a second portion of the seam utilizing the second configuration.

70. The method of claim 69, further comprising:

sensing a non-vacuum condition; and

shifting from the second configuration to the first configuration.

71. The method of claim 70, further comprising:

initializing in the first configuration.

72. The method of claim 71, wherein:

the first portion is a left side; and the second portion is a right side.

73. The method of claim 71, wherein:

shifting to the second configuration includes disconnecting a first electrode from a seal wire and connecting a second electrode to the seal wire.

74. The method of claim 71, wherein:

shifting to the second configuration includes decoupling a first electrode from a seal wire and coupling a second electrode to the seal wire.

75. The method of claim 74, wherein:

shifting to the first configuration includes coupling a first electrode to the seal wire and decoupling a second electrode from the seal wire.

76. The method of claim 73, wherein:

shifting to the first configuration includes connecting a first electrode to the seal wire and disconnecting a second electrode from the seal wire.

77. The method of claim 76, wherein:

shifting to the second configuration further includes timing the sealing the first side until a first predetermined time limit is reached.

78. The method of claim 77, wherein:

shifting to the first configuration further includes timing the sealing the second side until a second predetermined time limit is reached.